

Influence of horizon elevation on the sea-finding behaviour of hatchling flatback turtles exposed to artificial light glow

Kellie Pendoley, Ruth L. Kamrowski*

*Corresponding author: ruth.kamrowski@penv.com.au

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Supplement 1: Spectral characteristics of lights used in this study

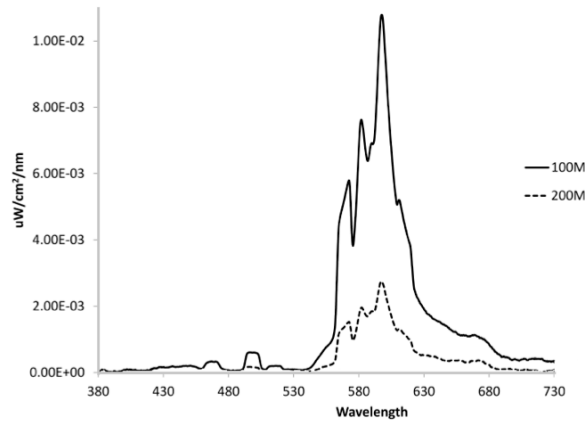


Fig. S1. Spectral power distribution curve for the HPS light measured at 100 m and 200 m from the arena

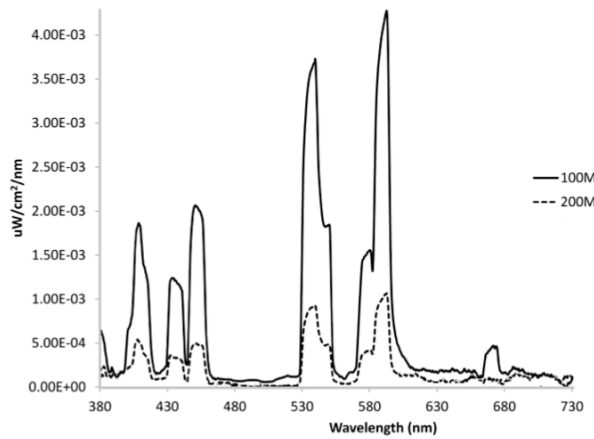


Fig. S2. Spectral power distribution curve for the MH light measured at 100 m and 200 m from the arena

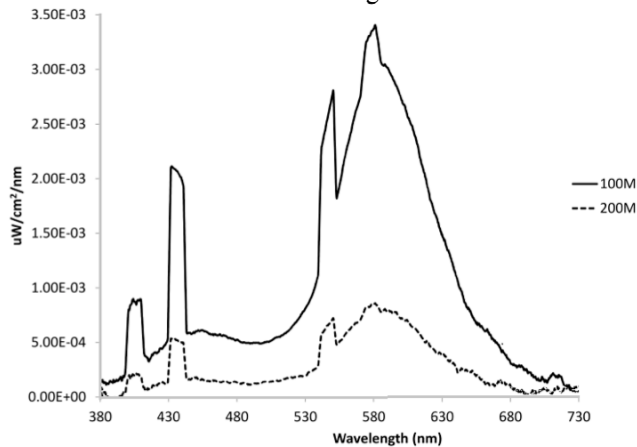


Fig. S3. Spectral power distribution curve for the FW light measured at 100 m and 200 m from the arena

Supplement 2

Table S1. All hatchling orientation indices (see also Fig. 3) when the light array was positioned behind a dune producing a silhouette of 16° elevation. All hatchlings were classed as 'sea-finding'. Categories of light intensity correspond to intensities of 500 (low), 1000 (med), and 1300 (high) watts, for metal halide (MH) and high pressure sodium vapour (HPS) lights, and 504, 1008, and 1296 watts, respectively, for fluorescent white (FW) lights

Light type	Intensity	n	μ	r	Circular SD	95% CI		Rayleigh test (Z)	Rayleigh test (p)
HPS	Low	27	347.5	0.98	12.19	342.9	352.1	25.81	< 0.001
	Med	28	348.8	0.9	25.7	339.3	358.3	22.9	< 0.001
	High	21	354.5	0.89	27.97	342.6	6.5	16.55	< 0.001
FW	Low	29	357.5	0.96	15.43	351.9	3.1	26.97	< 0.001
	Med	30	355.6	0.97	15.05	350.2	1	28	< 0.001
	High	22	347.2	0.97	13.86	341.4	353	20.75	< 0.001
MH	Low	30	351.8	0.96	17.31	345.7	358	27.75	< 0.001
	Med	30	0.7	0.96	16.02	355	6.4	27.39	< 0.001
	High	22	354.7	0.89	27.6	343.2	6.2	17.44	< 0.001

Table S2. All hatchling orientation indices (see also Fig. 4) when the light array was positioned in a shallow creek bed, producing a silhouette of 2° elevation. The symbol * denotes trials where hatchlings were classed as 'misoriented', and the ^ trials where hatchlings were classed as 'sea-finding'

Light type	Intensity	n	μ	r	Circular SD	95% CI		Rayleigh test (Z)	Rayleigh test (p)
HPS	Low^	20	341.4	0.95	17.52	333.7	349	18.21	< 0.001
	Med*	20	319.8	0.96	17.03	312.4	327.3	18.31	< 0.001
	High*	31	314.1	0.93	22.08	306.3	321.9	26.72	< 0.001
FW	Low^	18	338.6	0.95	18.5	330	347.1	16.22	< 0.001
	Med*	20	334.1	0.96	16.02	327.1	341.1	18.5	< 0.001
	High*	30	329.7	0.92	22.99	321.4	337.9	25.54	< 0.001
MH	Low*	39	316.1	0.92	23.24	308.9	323.4	33.08	< 0.001
	Med*	34	318.5	0.94	19.6	312	325.1	30.25	< 0.001
	High*	59	306.1	0.97	15.12	302.2	310	55.03	< 0.001